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ORIGINAL ARTICLE.

Homicide and Suicide.

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As an indication for treatment no question surpasses in interest and importance the suicidal and homicidal tendencies of the insane. Additional weight is given the same subject by the bearing of these symptoms upon the surroundings of the patient in regard to proper protection for himself and friends.

One is sometimes loth to send to an asylum a mild case, so-called, and furthermore, it is not always easy to convince the friends of the necessity of such action. In such a dilemma as this the probability of suicide or homicide is of material value in determining the course to be pursued. Of 554 patients, of both sexes, all those admitted to the State Hospital for the Insane at Danville, Pa., during the years 1891 and 1892, 17 per cent. had made actual suicidal attempts, while of the same number 16.6 per cent. had attempted or accomplished homicide. These figures do not include those cases in which the propensity was present, but did not result in any overt act. In view of these facts it becomes the duty of the medical attendant to consider well before undertaking to conduct treatment in the ordinary home surroundings, in even the apparently mildest cases. To this end an inquiry into the psychological states which give origin to such acts becomes a matter of some interest.

I. Simple Subjective Depression.—This condition is found in melancholia in its simplest form, the melancholia sine delirio. The patient's emotional condition is painful without any definite delusions. He has a subjective feeling of worthlessness, and, a circumstance which adds greatly to the danger, his reasoning powers being active though morbidly directed, he argues that such a life as his can only be an encumbrance to his friends and to himself. Thus, in a moment of depression deeper than usual, he brings to a sudden and tragic end an existence which has ceased to be anything but a burden. This morbid logic may be pushed further. Since he himself is so debased, his wife, his children and others of his immediate family are forever disgraced, and dreading for them some awful danger, which probably in the majority of cases takes no definite shape, his affection prompts him to place them beyond the reach of harm. Thus result some of the horrible combinations of homicide and suicide which periodically shock society.

II. Simple Snbjective Exaltation.—Expansiveness being characteristic of mania, it is to this disorder that we look for this psychic state. The typical maniac is an exalted being. Everything for him is *coleur de rose.* Care, anxiety, sorrow are things forgotten. His heightened perception sees only the good things of life, and in his desire to possess them he forgets the bonds and trammels of society and acts wholly upon the impulse of the moment. taking no heed of consequences. In this way, without any distinct intention of homicide, he accomplishes the deed. A struggle begun in play may end in murder, simply through loss of the inhibitory power. Again, his impaired judgment leading him to overestimate his own physical powers or to underestimating the difficulties of a given under-

taking, he may lose his life trying to accomplish dangerous or impossible feats, as jumping from high windows, swimming long distances, etc.

In the later stages of the disease the element of anger comes more into play. The mind, exhausted by the constant succession of conceits, which follow so rapidly, the one upon the other, that consciousness takes but imperfect note of them, becomes confused. The patient is morose, irritable and prone to outbursts of fury. Now he is destructive for destructiveness' sake, homicidal for the brutal satisfaction such acts give him, mutilates himself in almost every conceivable manner, and may even end his life in his blind destructive rage.

III. Delusions and Hallucinatious.—The delusions of the insane, accompanied and modified as they often are by hallucinations constitute an important guide in estimating the likelihood of suicidal or homicidal developments. While they have been variously classified, perhaps the best primary division for the purposes of this article is by the induced emotional state into depressed and exalted delusions. Patients exhibiting the former of these, when unsystematized, may almost be said to be invariably suicidal, and often homicidal as well. Thus the melancholiac, under the influence of the delusion that he and his family are to be subjected to horrible torture and a lingering death, and perhaps hearing a voice urging him to end the suspense and escape the torment, deliberately plans and executes the murder of his whole family, and afterward ends his own sufferings by suicide. Or, believing himself deserving of death as a penalty for having committed some real offense of a trifling nature, he gives himself up to the police, and, in order to accomplish his doom, accuses himself of some heinous crime which happens to be prominently before the public at the time, though he has been in no way connected therewith and may even have been miles away from the scene of the tragedy. This point was illustrated in the recent celebrated Borden trial at Fall River, Mass. During the interval between the inquest and the trial the attorney general received almost daily "confessions." Some of these documents were written by insane persons of the type referred to, while others, of course, emanated from the well known, notoriety-seeking "crank." In order to gratify their suicidal desires without conflicting with their religious objections to that crime, these patients may even resort to homicide, hoping to receive as punishment the extreme penalty of the law. (Spitzka.)

Systematized depressed delusions do not as a rule lead to suicide, though the paranoic victim of persecution, on account of great riches or social eminence, to escape the machinations of his enemies, may adopt the same course as the delusional and depressed melancholiac. This, however, is rare, such a patient preferring recourse to law or homicide as an alternative. Having failed at law to recover possession of the fortune unjustly withheld from him, he may turn to murder as a last resort. Similarly the sufferers from the systematized delusions fancies that on account of his preeminence over the rest of mankind he has been selected by fate to remove a supposed tyrant, and a Garfield is lost to society.

In whatever form of insanity hallucinations are found, there is danger of suicide and homicide. Of these hallucinations, those of hearing are particularly dangerous. The hallucinatory lunatic may hear voices commanding him to kill himself, his wife, his children, prominent persons—no one is exempt.

Exalted delusions, per se, seldom lead to suicide. Here the great danger lies in homicide. Besides the dangers already enumerated under the head of subjective exaltation, the maniac may be possessed of delusions of an intrinsically homicidal nature which are too various to recapitulate, but which require careful consideration in their possible bearing on the safety of the community.

IV. Morbid Impulse and Morbid Propensity.—These two conditions are capable of sharp differentiation, but may both lead to suicide and homicide in a somewhat similar manner. The former is a sudden act, dependent on a conception, and is more or less

at variance with the individual's mental state. The imperative conceptions to which those in complete mental health are at times subject are familiar to all. A gentleman of more than usual education and intelligence and of undoubted sanity, a resident in the vicinity of the Niagara river, has told me that he has never been able to stand on the bank overlooking the great cataract without being seized with a desire to throw himself down on the rocks beneath. So strong is this impulse that he has been compelled to walk away to gain relief. These conceits in the insane are carried into action, and we have the imperative act or morbid impulse. Thus the sight of a suitable instrument, as a knife, a pistol or a rope, or reading or hearing of a particularly revolting murder or suicide, gives rise to the imperative conception, which in turn results in the morbid impulse to destroy the life of self or another. These impulses are so various in kind and so well recognized that they have in some cases led to the attempt to establish distinct classes of insanity with the character of the impulse as a basis, as, the impulse to incendiarism, pyromania; to theft, kleptomania; to the immoderate and paroxysmal abuse of alcohol, dipsomania. As they differ widely in their manifestations, so we find them in widely differing classes of patients. Youths of both sexes at puberty, menstruating girls, pregnant women, and women at the climacteric are frequently the victims of these dominating and dangerous seizures, and it seems to be the rule in these cases that the objects selected are those who are nearest to the subject in the subject in the ties of affection and relationship. Almost every class of insanity has produced instances of this kind, but it is in melancholia, and particularly melancholia sine delirio, that the greatest danger lies. Great indeed has been the sacrifice of human life upon the altar of the morbid impulse, while popular opinion, reluctant to believe anything insanity which does not require the restraint of straps and bars, officiates as the great high priest at the ceremony, and will continue to furnish a bountiful supply of victims till the medical profession learns that its duty is to educate the people to the fact that the "mild cases" are often the "dangerous cases," and that the patient who is subject to "fits of the blues" is often a potential murderer and suicide.

The morbid propensity differs from the impulse in being more in consonance with the mental condition of the subject, being the awakening into life of a tendency which has long been dormant in the mind. In this state there is no proper knowledge of criminality after the act, as there is in the impulsive form. Spitzka (Manual of Insanity) points out that morbid propensities are general perversions of the two main instructive tendencies of the human race: the desire for food and the sexual appetite. It is the latter of these which is the more likely to give rise to homicidal complications. Sadisin, or lust murder, in which the death or mutilation of the victim is essential to the complete gratification of the ravisher, illustrates this condition.

V. Disturbances of Consciousness.—In epilepsy there is a sudden and more or less complete loss of consciousness, with or without convulsive movements, which may be momentary or may last for hours. These patients are the most troublesome and most dangerous to be found in the wards of an asylum. Were it in every case a matter of convulsion and succeeding stupor and sleep, from which the patient awakes in his right mind, this proposition would not hold good. But, unfortunately, this is not the case. The malady may show itself in any stage between a momentary giddiness and the pronounced manifestation of the grand mal type. The motor disturbance may be preceded, replaced or followed by excitement of a furious, destructive and homicidal nature. Thus, after a convulsion, an epileptic will rise and immediately, without provocation, attack anyone near him, tear off his clothing or attempt to injure himself in various ways. This condition may last several hours, or even days, after which the unfortunate patient will return to his usual frame of mind without any knowledge of his acts during excitement, and on being informed will seldom express or appear to feel the

least contrition. Or the same state of things may obtain when no convulsion has been observed, the excitement taking its place or the furious outbreaks may be succeeded and terminated by a convulsion. Where epilepsy has existed for some time there is a mental change which tends to progressive deterioration. Before dementia has become too far advanced the patient is morose irritable, fault-finding and subject to paroxysmal attacks of anger during which he becomes homicidal and often suicidal as well.

VI. Imitation.—This condition is practically confined to idiocy and imbecility and of low grades. Where the congenitally deficient are confined with the insane, cases are quite frequent in which the habits, language and gestures of some striking figure among their associates will be more or less faithfully reproduced. This same imitative faculty, which is put to good service in the education of unfortunates, is sometimes disastrous in its results, and has in some cases led to the commission of horrible crimes. It will thus be seen that in mental aberration of whatever form one or both of these dangerous and distressing symptoms may be found. However, all forms are not equally dangerous, and in the majority of cases these morbid tendencies may be foreseen and precautions taken. To state the matter briefly, the most dangerous form of insanity, from a suicidal point of view is melancholia, in every form except the obstreperous form of melancholia, the melancholia sine delirio, or the "mild case of melancholia," for the reasons that, firstly, the reasoning power is but slightly impaired; secondly, the apparently mild form of the disorder gives a false sense of security; and thirdly, the greater liability to morbid impulses.

Of the melancholiacs admitted to the above hospitals during the two years covered by these statistics, 32 per cent. had actually attempted suicide, as against 14 per cent. of the epileptics and 8 per cent, of the maniacal patients. These statistics naturally do not include those cases in which such attempts have been successful to the number of which the newspapers bear daily evidence. Among women this propensity seems relatively more active, the proportion being, women, 40.6 per cent.; men, 24.5 per cent.

As might be expected, epileptic insanity claims the greater proportion of homicides, 41 per cent. of those admitted during the two years. Here again the women have the advantage of numbers. Of the females 50 per cent. were homicidal, and of the males 35 per cent. Next in rank is melancholia with 18 per cent., as against 17.5 per cent. in mania and 18 per cent. in paretic dementia.

A New Symptom of Cancer.

Dr. Bogdan, in British Medical Journal.

A woman, aged 48, suffering from cancer of the stomach; the disease had gone through a long period of latency. She presented on each cheek a patch of wine-red discoloration formed by the dilatation of the superficial venules, that showed out sharply against the pale yellow of the surrounding skin. On the strength of this symptom alone I was able to make diagnosis of probable cancer at a time when there was yet no other manifest sign of this affection. Such superficial varicosities on the cheeks are a valuable help to the early recognition of certain cancers, and I have found them in about two-thirds of the cases which have come under my observation; they are particularly frequent in cases of epithelioma of the stomach and uterus, but less common in malignant diseases of other organs.

A Tonic Aphrodisiac.

℞. Strychniæ sulph grs.1-32
Acid phosphorici dil..... ℥i
Aquæ distil..... ℥i
M. To be taken in water four times daily.

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Topeka, Kansas, Saturday, Oct. 26, 1895.

Quinine.

The long continuance of large doses of quinine frequently occasions much criticism from the patient. Just what the results are or what permanent injury may be done, it is not always possible to say. We often hear people ascribe deafness to the long or excessive use of quinine. There is also evidence to show that certain forms of disease of the eye have resulted from its use.

One of the most serious questions that arise in connection with the use of large doses of quinine is the effect upon the heart. In quinine habitues we frequently find a functional disturbance of heart action. Small doses stimulate, but large doses depress the heart and arterial pressure. In using quinine as an antipyretic, this action should be taken into consideration. In croupous pneumonia, where the heart action is labored, the depressing effect of large doses of quinine and the tendency to heart failure must not be overlooked. In many of the cases of pneumonia reported terminating in heart failure it may be observed that large doses of quinine were administered.

In the continued fevers the extended use of quinine in large doses increases the weakness of the heart, and we believe in some cases results in permanent lesion. In fever of long duration it has been observed that the heart muscle suffered from lack of nutrition. Its action is weak and its work is performed with difficulty, and if it is unable to empty its cavities dilatation results, and especially if a further depressent of its action is added. The continued effect is toward permanent heart debility. Convalescents from long or severe fevers suffer for considerable time from labored heart action. We have noted a number of cases where the pulse rate varied from 95 to 120 a year or more after convalescence from typhoid fever, and on examination the contraction was found to be short and insufficient. The pulse weak and compressible and excited by slight exertion. In the majority of these cases large doses of quinine had been administered early in the disease. The case presenting the most marked disturbance gives a history of six weeks of fever, during which time the daily dose of quinine was from 30 to 90 grains. Recovery in every other respect seems to have been complete, yet more than six months after convalescence the pulse rate is 95, reaching 120 on very slight exertion.

While quinine is properly regarded as a most valuable antiperiodic and antipyretic, it is quite reasonable to question its influence upon recovery. It is not improbable that in the low fevers quinine retards convalescence.

Quinine, when taken by a healthy person in large doses, greatly disturbs the nervous system, and in malarial subjects has been known to reproduce the paroxysms. The drug is rapidly diffused but slowly elimi-

nated, appearing in the urine for several days after administration, and it seems that if any therapeutic effect is to be derived from its use it should be observed after a few large doses. If not observed, its continued use is not likely to result in benefit.

Societies.

The Northeast Kansas Medical Society, which met in Whiting Tuesday, the 22d, was remarkable only for the absence of its members. This society has been struggling along for a number of years with a good membership but a very poor attendance. It is unfortunate for the society and very unprofitable for those who try to attend. These societies are for the particular benefit of the physicians who are members, and they should appreciate them sufficiently to give a little of their time to assist in their good work. An association of physicians for the purpose of mutual improvement will usually present greater advantages to its members than the advertisement which this membership gives. Dr. Shotgun may know all he wants to know about medicine, and he may have all the practice he can attend to, but Dr. Slowman may be able to tell him a few things he doesn't know. The exchange of thought and the reports of various cases among a neighborhood of physicians leads to better work and a more friendly rivalry.

Renal Pathology.

The Practitioner.

Two interesting contributions on this subject appeared recently in the *Weiner Klinische Rundschau*, from the pens of Semmola and Freund. It has been held that the albuminuria of renal diseases arises from disturbance of the glomerular circulation, or structural changes in the kidney tissues generally, tubules as well as glomeruli. Semmola argues that the primary change is in the proteids of the blood plasma becoming more or less diffusible; he founds this opinion upon the results following the experimental injection of egg-albumen, and holds that this produces not only albuminuria, but other phenomena seen in Bright's disease, such as albuminuric retinitis for instance, and that these results are all due to the circulation in the blood of a so-called toxalbumen. It is certainly a fact of considerable interest that the repeated subcutaneous injection of egg albumen should, in seven or eight weeks, produce changes of the retina and optic disc; but the real point is whether the retinitis is not due to the secondary effects produced by the damaged kidneys, rather than to the presence of the albumen in the circulation. Freund details his own experience —that the proportion of globulin to albumen in the blood serum is as one to two, or even as one to three—but does not regard this as specific of Bright's disease, as he found somewhat similar proportions in pernicious anæmia.

He also discovered that the coagulation temperature, both of blood serum and of the serous exudations in Bright's disease is higher than that of normal serum. Finally he experimented on the diffusibility of the serum in seventeen cases of chronic parenchymatous nephritis, with the result that, although the blood serum underwent changes, such scarcely afforded evidence sufficient to establish the view that morbus Brightii is primarily a blood disease.

The observations of Shafer and Oliver on the physiology of the supra-renal bodies (*Journal of Physiology*) throw new light on Addison's disease. It was found the supra-renal bodies elaborate a substance which has a very powerful action on muscular tissues, and more especially on the muscular coat of arteries; in very small doses it causes an enormous heightening of the blood pressure, dependent upon contraction of the peripheral vessels, due to a direct action of the substance on the muscular coat, and not to any action on the medullary vasomotor center; it also acts directly on the heart, producing augmentation and acceleration, provided the vagi are divided. On the voluntary muscles its action is such that the period of contraction is slightly, and the

period of relaxation greatly prolonged. On respiration more marked effects are obtained in rabbits than in dogs; in the former the respirations are temporarily arrested, in the latter they are rendered shallower. The active principle of the supra-renal substance only found in the medullary portion of the gland, and its activity is not destroyed by dilute mineral acids, by boiling unless very prolonged, nor by peptic digestion; alkalies, however, diminish its potency. In cases of Addison's disease, no physiological action was obtained from the extract of the diseased capsules. It is thus clear that these glands have an internal secretion, and it is possible that the phenomena of Addison's disease are entirely or in part due to the absence of this active principle. The muscular and circulatory weakness would at any rate thus receive an explanation. As yet no very striking therapeutic success has been achieved in Addison's disease by the injection of supra-renal extract, and in fact it is remarkable that it is only in myxœdema that good and striking results have been obtained by the use of animal extracts. This failure suggests that in other maladies, such as diabetes, Addison's disease, etc., there must be some other factor at work besides the deficiency of a normal internal secretion.

Infection of the Tonsils With Bacillus Tuberculosis.

Modern Medicine.

Prof. Dieulafoy recently reported before the Academy of Medicine, Paris, some interesting experiments which demonstrate the frequency of tuberculosis of the tonsils. We quote the following abstract of his paper from the *Medical Week:*

"There is a variety of tuberculosis of the pharynx, of a sluggish, masked type, which usually attacks the adenoid tissue in the naso-pharyngeal region. This tuberculosis is manifested by exuberant growth of the principal lymphoid organs of this region—that is to say, by hypertrophy of one or both of the two palatine and the pharyngeal tonsils.

"With regard to the pharyngeal tonsil, tubercular lesions of this tissue resemble those described under the name of adenoid vegetations, while tubercular lesions of the palatine tonsils are confounded with the disease known as simple hypertrophy of the tonsils.

"My opinion is based on the following facts: I inoculated a certain number of guinea pigs with fragments of the tonsils of adenoid vegetations from various patients. Of sixty-one animals inoculated with fragments of the tonsil, eight, or thirteen per cent., developed general tuberculosis; of 35 inoculated with pieces of adenoid vegetations, seven, or twenty per cent., became tuberculous.

"It is, therefore, now established both clinically and experimentally that, in many cases, hypertrophy of the tonsils and adenoid vegetations are nothing but masked forms of tuberculosis.

"In all subjects from whom pieces of the tonsils or adenoid vegetations were removed for my experiments, the tuberculosis of the pharynx was primary and not consecutive to pulmonary tuberculosis. The assumption would not be justified that the bacilli had been transmitted to these patients by heredity (a mode of transmission which is exceptional), but it is probable that young people affected with this hypertrophic form of tuberculosis have inherited a soil which we are in the habit of describing as lymphatic. This being admitted, it is sufficient for the development of the disease that a young person, thus predisposed, live in a tubercular atmosphere, or that the bacillus be introduced into the system with the food, more particularly milk.

"It is known, moreover, that Professor Strauss has proved the existence of virulent tubercle bacilli in the nasal cavities of healthy individuals frequenting rooms inhabited by consumptives. On the other hand, a number of experiments are on record, tending to prove that the tonsils may become infected by swallowing food containing the tubercle bacillus.

"Such is the first stage of this masked tuberculosis of the tonsils. In many cases

there is no second stage, the phagocytic reaction gaining the upper hand after a few months or years, the tonsillary tissue becoming fibroid and hard, and the process ending in recovery, without generalization of the tubercular infection. In other instances, however, after having remained in the tonsils for a time, the bacillus enters the lymphatic network, determining enlargement of the glands in the submaxillary and cervical regions.

"Secondary infections, such as scarlatina, measles, whooping cough, etc., sometimes occur in connection with generalization of the process and suppuration of the enlarged glands.

"Cervical glandular tuberculosis may be checked in its course, and recovery obtained, but in some cases it is rapidly generalized.

"The arrival of the bacillus in the lungs constitutes the third stage in tonsillary tuberculosis. After passing from gland to gland, and from reticulum to reticulum, the microbe ultimately reaches the great lymphatic vein or the thoracic duct, and is carried away in the venous circulation, whence it passes into the right heart and finally into the lungs.

"Even then, however, not all is lost. The number of bacilli which reach the lung may be so small that this organ is not seriously affected. Sometimes again, the lungs defend thtmselves against the attack of the bacillus by hemoptysis; but in other cases the disease runs its allotted course as an ordinary tubercular phthisis."

Prof. Chauveau, in discussing the above paper, calls attention to the fact that tuberculosis of tissues about the base of the tongue or in the fauces, is frequent in animals fed upon tuberculous food. In such cases the glands of the neck and submaxillary region also usually become involved.

DR MCKEE recommends the addition of soap liniment to cod liver oil for inunction in infants. First wash the child in warm water, then rub with cod liver oil, 3 parts to 1 part of soap liniment.

Uretero-Cystostomy as a Secondary Operation.

The Post-Graduate.

The Johns Hopkins University is giving us good work as usual.

Up to the present time the usual procedure, when one of the ureters has been cut or tied in a laparotomy, has been to immediately resect the corresponding kidney. It has been known that it was possible to restore the continuity of the ureter by invagination and suture, should the injury be discovered at the time of the operation; but the more usual practice has been that mentioned—an immediate removal of the kidney, the ureter of which had been injured.

The case of Dr. Kelly, at the Johns Hopkins University, is the first in which, at a date subsequent to the original injury of the ureter, a secondary operation has been performed to anastomose the ureter into the bladder. The original operation was a vaginal hysterectomy for carcinoma of the cervix.

The disease had extended so far out into the broad ligament that the right ureter was tied and cut in the operation, with the result of establishing a urinary fistula in the cicatrix. Seven weeks after the original operation the second operation was done for the repair of the ureter.

The patient in the Trendelenburg position, an incision twelve centimetres long was made through the abdominal walls. The omentum and intestines were dislodged from the lower abdomen and pelvis with great difficulty. The end of the ureter could not be found on the pelvic floor on account of the rigidity and inflammation surrounding the line of scar-tissue between the rectum and bladder. The right ovary and tube were also pinned down to this scar-tissue by numerous vascular adhesions. The attempt to reach the ureter at this point was abandoned. It was readily found at pelvic brim after lifting up the caput coli and incising the peritoneum and pushing aside the fat. It was then traced from the point of crossing the common iliac artery

down to the pelvic floor, exposing the whole length of the pelvic floor by splitting the peritoneum over its upper surface. The anterior portion of the ureter was involved in the inflammatory material surrounding the scar, which bled so freely that no attempt was made to dissect it out. Four centimetres of the length of the ureter lying directly posterior to the scar-tissue were dissected out and the ureter lifted up from its bed and divided close to the scar, sacrificing as little as possible of its length. As it could not be sutured to the bladder, the latter was dissected free from its attachments to the horizontal rami of the pubis on both sides, with scissors and fingers, and dropped down into the pelvis so as to extend it and carry it more into the back part of the pelvis, gaining at least three centimetres in this way. By this means the ureter and the bladder were easily approximated without strain.

A small incision through the bladder wall, covered with fat at least a centimetre thick, at the point on the right nearest the ureteral end drawn straight across the pelvis, was made through the peritonum, being not more than three or four millimetres in length, and just large enough to receive the ureter snugly. The under surface of the ureter was slit up for about four millimetres, enlarging the caliber of its orifice to avoid a stricture, and with a pair of long, delicate forceps, introduced through the urethra, the bladder, and through the incision, the ureteral end was caught and drawn into the bladder and held there while it was being attached to the bladder-wall by about six fine interrupted silk sutures, passed through the muscular tissue of the bladder and peritoneal and muscular coats of the ureter on all sides, beginning with the under side. The ureter, thus dissected out of its bed and attached to the bladder, was stretched like a lax cord from the posterior part of the pelvis to the bladder, which lay gibbous and flattened out on the pelvic floor. The abdominal incision was closed down to its lower angle, where a narrow gauze drain was inserted tor fear of leakage. Care was taken, in closing the incision, not to draw together the peritoneum underlying its lower end, to avoid raising the bladder and indirectly pulling upon the ureter. No leakage occurred and the drain was removed, the wound healing without suppuration, with perfect restoration of continence. At a subsequent cystoscopical examination the abnormally-placed ureteral orifice was found opening into the posterior hemisphere of the bladder, into which it freely discharged its urine.

A Novel Method of Assisting Uterine Inertia.

Dr. Cowen in the Medical Age.

Possessed of a somewhat extensive midwifery practice, and having by repeated experience learned the advisability of having the bowels thoroughly well cleansed, for the comfort of both patient and accoucheur, it has been the writer's custom to carry a large bottle of Parke, Davis & Co.'s glycerin-suppositories. One day he was called in a hurry to attend a young woman with her first-born. Not having been previously engaged for the case, he found, upon arrival, that the necessary preparations had been overlooked. After the usual cautions an examination was made, which displayed the os uteri well dilated, membranes unruptured, parts small, and pains of a very weak nature, with long intervals between. Upon inquiry it was learned that she had been in labor about twelve hours, but it had not been considered necessary to send for a physician, the pains being so very weak. Thinking a long and tedious case lay before him, Cowen adopted his usual routine practice of placing a glycerin suppository in the rectum. It had not been long in situ when the patient implored him to remove the "horrid thing" as it caused very severe pain. Presently, to the writer's surprise, he discovered that the pains were those of labor, the intervals being quickly shortened.

After eight or ten strong pains, a second examination revealed little or no progress of the head, and, at the persistent and re-

peated requests of the patient, he removed the suppository—that is, what remained of it. Immediately the pains ceased and the intervals again became lengthened. After waiting for an hour or more it suddenly occurred to the writer that the glycerin suppository previously placed must have acted otherwise than expected—that, in fact, it might have stimulated the uterus to activity. Anxious to determine if such were the fact, he reintroduced a suppository in the rectum, assuring the woman that this time it must remain. As a result, increased uterine contractions with hard labor-pains returned. Frequent examinations were made between each pain. Quickly the head advanced, and when it was well down upon the perineum, the latter being very rigid, the patient was placed upon her left side ready for delivery. Supporting the perineum, the head was shortly born, but at the same moment the remaining undissolved portion of the glycerin suppository fell out.

Before making known the above, Cowen experimented upon twelve cases, the notes of which he has in his possession, and in all these he conclusively proved the efficacy of glycerin suppositories in such cases, and now would not feel at all armed without them.

In conclusion the writer will be pleased to hear from any other practitioner upon the subject, as well as gratified to learn that others have had similar results.

Relationship Existing Between Serous Pleurisy and Tuberculosis.

Prof. Dr. H. Eichhorst in Medico-Surgical Bulletin.

It has long been known that a certain relationship exists between serous pleurisy and tuberculosis, and that a large number of patients apparently cured of the pleurisy sooner or later develop tuberculosis. The frequency with which this occurs, has, however, been variously estimated since a purely clinical observation is by no means reliable. Both pleurisy and tuberculosis are so frequent that it cannot in every instance be proved that the one is caused by the other, nor is it always certain that such a pleurisy has not been caused by a latent tuberculosis. Furthermore, it is possible that a serous pleurisy injures the lung tissue to such an extent that tubercle bacilli find a suitable soil for development. The bacteriological examination of the serous exudate of pleurisy very rarely shows tubercle bacilli.

Eichhorst, in order to arrive at more tangible evidence in this direction, made a series of experiments on guinea-pigs, taking a small quantity—1 c.c.—of the exudate from every case of serous pleurisy and injecting it into the abdominal cavity of the animals, who were killed after six or eight weeks, and their organs carefully examined. According to these experiments the serous exudate was tuberculous in only a few instances, since out of 11 animals inoculated only one developed a glandular tuberculosis. It seemed to the author, however, that these experiments were faulty, the more so since one guinea pig remained perfectly well, which was inoculated with the serous exudate of a man who had a pronounced pulmonary tuberculosis a few months after being apparently cured of the pleurisy.

Since it is difficult to find tubercle bacilli in serous exudate because they are present only in small numbers, if at all, the author believed that he had injected too small a quantity, and employed a larger syringe—capacity 15 c.c. The result of these experiments was of an entirely different nature. They were made from 23 patients, who were apparently in the best health when they contracted serous pleurisy without any apparent cause, and in whom absolutely no tubercular changes could be found in any organ. By the inoculation of guinea pigs with portions of the exudate of these patients, it was found that 15 animals—that is, 65.2 per cent.—contracted tuberculosis, and that only 8 (34.8 per cent.) remained free from the disease. These results would tend to show that almost two-thirds of all cases of serous pleurisy are of a tubercular nature.

As regards the commencement of the tubercular serous pleurisy, E. believes that it starts from a tuberculosis of the bronchial

glands, and not from concealed tubercles in the lungs, although it may also primarily be found in the pleural cavity. Other serous cavities have also frequently been found to be tubercular; out of 27 cases of exudative pericarditis, 8 proved to be of a tubercular nature. The same can be said of peritonitis and meningitis, although the pleural cavity seems to be the most frequently affected.

Accessories to Food.

Lafayette B. Mendel in Dietetic and Hygienic Gazette.

Many dietetic articles are consumed which have no value as food-stuffs. They have an agreeable action on the sense of smell and taste and on the nervous system also. These are condiments and aromatic beverages. The food-stuffs, as found in nature, are accompanied by seasoning and flavoring agents. These are indispensable, because they make the food palatable, and hence more inviting. The odor and taste of a dish often stimulates the appetite. Other factors influence the choice of a diet, such as variety in the food. Condiments not only make the food palatable, but they also assist the digestive processes by stimulating the secreting glands to increased activity. The flow of saliva is increased, and the activity of the gastric glands also. In the stomach these substances increase the peristaltic movement and augment the intestinal muscular activity. A better absorption is thus facilitated. The most important condiment is common salt, but its excessive use, like that of pepper, mustard, etc., is apt to be followed by dyspepsia.

Another class of food accessories, such as alcoholic and aromatic beverages in the form of wines, liquors, beer, tea, coffee, etc., influence the system in a different way. They enter the circulation and act directly upon the central nervous system. Their chief function is that of stimulation rather than a source of energy. The action of alcoholic beverages is due to the alcohol in them. The greater part of the alcohol is oxidized. It can be broken up with liberation of energy and heat. In a narrow sense it may act as a food-stuff. But it is an uneconomical food, because its store of energy must be smaller than that of the carbohydrates from which the alcohol was prepared. Although alcohol oxidizing in the system may be a source of bodily heat, still, investigation proves that its ultimate result is a lowering of temperature. In considerable quantities alcohol retards digestion, although this is partly counterbalanced by its stimulating effect upon the alimentary canal. It also has undesirable effects upon the circulatory and nervous systems. Coffee, tea, etc., act on the nervous system, but without the bad effects of alcohol. They owe their effects to alkaloids, which are found to be identical, or nearly so, with each other. Caffeine was discovered in 1820, and seven years later was found to be identical with theine. Xanthine, which occurs as a constituent of nearly all the body tissues, is closely related to caffeine; in fact the latter can be synthetically prepared from the other. Coffee has an invigorating effect on the system without any depression. It soothes in conditions of bodily and mental fatigue. Coffee cannot replace food. Work goes on at the expense of the organism; but coffee enables the body to wait until circumstances allow a repair of lost material. With sugar and milk it allows nourishment to enter the body. Coffee is said to stimulate gastric secretion and to increase intestinal peristalsis.

But Fraser has shown that coffee and tea retard peptic digestion. Tea has an action similar to that of coffee, the action of tannin being added. Tea is usually taken in too small quantities to have any undesirable effects. Large quantities have a bad effect on the stomach, because of the excessive lavage to which the organ is subjected.

Cocoa and chocolate have a different dietetic importance from that of coffee and tea. The former contain, besides the alkaloid theobromine, large quantities of fat and a considerable amount of proteids and starch. The proteids are albumins and globulins. In addition to the stimulating effects of the theobromine, cocoa and chocolate have a

true nutritive value. Theobromine is closely related to caffeine. Although cocoa contains much of nutritive value, it cannot all be utilized. The dietetic value of a food is determined by its chemical composition. Investigations have shown that even under favorable circumstances 46.3 per cent. of cocoa proteid left the body undigested. Cocoa is apt to produce a sense of gastric fullness, cause eructations of gas, and sometimes induces nausea. Dyspeptics are frequently unable to take chocolate and cocoa because of their richness in fat. The tannic acid in them forms insoluble compounds with proteids and precipitates the digestive ferments.

Another class of infusions, such as beef tea and "extract of meat," was formerly considered to have great nutritive value. Extracts of beef, prepared by extracting meat with boiling water, are not nutritious. Beef extracts contain largely inorganic salts and the waste products of muscular katabolism, such as creatine, creatinine, xanthine, hypoxanthine, etc. Some of these are closely related to the alkaloids caffeine and theobromine. Beef tea has no nutritive action; its influence is one of stimulation, exerted on the nerves of taste and smell. It provokes the stomach to increased secretion.

The Pathogenesis of Diabetes Mellitus.

La Semain Medicale.

Dr. Kaufman upholds the view that the excess of sugar in the blood in diabetes is always due to an increase in the sugar formation, and not to a diminished sugar destruction in the capillaries. He believes that in the normal condition the destruction of sugar in the blood is always compensated by an equivalent sugar formation by the liver, and that any modification of the destruction of sugar in the tissues reacts at once on the liver by the nervous paths or by the blood, and impresses on the sugar formation an activity in direct relation to the sugar destruction. In hibernating animals the sugar in the blood diminishes during the period of torpor, although the sugar destruction in the tissues is greatly decreased. After the revival the sugar in the blood increases greatly, though the consumation of sugar in the tissues is increased. Under normal conditions the amount of sugar in the blood of the horse is increased during muscular activity; also during digestion there is an increase of the sugar in the blood. In these physiological conditions the increase of sugar in the blood is to be explained by increased sugar formation. This is also the cause of the glycosuria after poisoning by curare and morphine, in asphyxia, after the administration of anæsthetics, after lesions of the nervous system, and after extirpation of the pancreas in animals. In the case of pancreas extirpation the evidence against the increased sugar formation is the supposed diminution of oxidation in diabetes. Recent researches have shown, however, that in many cases of diabetes the activity of oxidation and nutrition is the same as in the normal state. Lepin and Barral, from the chemical examination of the blood, conclude that in experimental pancreatic diabetes, and in diabetes, in man, the glycolytic power of the blood is diminished—that is, the power of sugar destruction is diminished. Kaufmann and Chauveau have made a series of analyses of the arterial and venous blood in healthy persons and in cases of diabetes, but they have never found any difference between the normal sugar destruction and that in diabetes. Kaufmann has isolated the liver by trying all its vessels in a healthy dog, and also in another dog which had been rendered diabetic by extripation of the pancreas. The action of the sugar-producing focus being suppressed, the sugar in the blood gradually became diminished during its circulation in other parts of the body. But an hour after the insolation of the liver the blood had lost the same proportion of sugar both in the healthy and in the diabetic animals. After having determined the diminution of sugar, Kaufmann re-established the circulation in the liver by removing the ligatures placed on the vessels. He found the sugar in the blood soon regained its previous percentage.

Hence he concludes that sugar destruction proceeds with the same activity in dogs rendered diabetic by pancreas extirpation as in the normal condition, and that the excess of sugar in the blood is due to increased sugar formation by the liver. He believes that increased sugar formation and not diminished destruction in the capillaries is the cause of the excess of sugar in the blood in the diabetes produced by pancreas extirpation, by lesions of the medulla, and in all other ways.

Two Millions of Patients.

Medical Record.

There is a doctor in St. Louis who says that he has cured two million cases of insanity in the last thirty years. This statement, we understand, was made while he was serving in the capacity of an expert on the witness stand. He subsequetnly affirmed the correctness of the statement in a letter to the *Medical Weekly*.

Two million cases in thirty years means 66,666 cases every year. This means 182 cases a day. Allowing that the doctor, with this active practice, slept only six hours and worked the remaining eighteen seeing his two million cases, this would give him about ten cases of insanity every hour in the day, or one every six miuutes. This, of course, is quite a possible feat, but it shows an extraordinary activity on the part of the St. Louis mind. The more fairy-like side of the tale comes out when one studies the source from which the two million cases of insanity come. If the statistics of this country are correct, there have not been two million cases of insanity in all United States within the last thirty years. There may be uncounted millions of lunatics, however, in Missouri, being so near to Kansas. But upon the whole we fear that the esteemed expert must have been suffering somewhat from an expansive delusion in regard to his experience in insane matters. We have heard of people who, having had a few minutes interview with a lunatic, felt as though they had seen sixteen, and no doubt this sense of numerical exaggeration which attacked the St. Louis doctor, was due to some such subjective influence as this. Still, it would have been more the credit of Southwestern medical expert testimony, if arithmetic were a branch of science carefully studied. At present it seems as though there is one medical expert who lisped in numbers, because the numbers came.

Molasses Pavements.

Scientific American.

Perhaps the oddest pavement ever laid is one just completed at China, Cal. It is made mostly of molasses, and if it proves all of the success claimed for it, it may point a way for the sugar planters of the South to profitably dispose of the millions of gallons of useless molasses which they are said to have on hand. The head chemist of a sugar factory at Chiona, Mr. E. Turke, was led to make certain experiments, of which the new sidewalk, a thousand feet long, from the factory to the main street, is the result. The molasses used is a refuse product, hitherto believed to be of no value. It is simply mixed with a certain kind of sand to about the consistency of asphalt and laid like an asphalt pavement. The composition dries quickly and becomes quite hard, and remains so. The peculiar point of it is that the sun only makes it drier and harder, instead of softening it, as might be expected. A block of the composition, two feet long, a foot wide, and one inch thick, was submitted to severe tests and stood them well. Laid with an inch or so of its edges resting on suports, it withstood repeated blows of a machine hammer without showing any effects of cracking or bending.

DR. H. L. ALKIRE, formerly professor of anatomy in the Kansas Medical College, has gone east for a course in ophthalmology, to which branch of medicine he expects to devote himself in future.

Apoplexy.

Dana in Medical Record.

Apoplexy occurring in early adult life is much more frequently due to syphilis than embolism, and syphilis is a factor in a third of all apoplexies, at least in large cities. Apoplexies are increasing in disproportionate frequency. The disease does not especially affect brain workers if they live temperately, but rather spares them. An attack is sometimes a conservative agent, calling a halt to excessive activity and intemperate living, and actually prolonging life. About one-fourth of those stricken with apoplexy die from the attack (hemorrhages being the most dangerous, thromboses, especially syphilitic, being least so). The average duration of life of those who have had and survive one shock is over five years. The chances of a second attack before the fourth year are always considerable, yet do not amount to fifty per cent., and are inconsiderable so far as hemorrhages are concerned. Thromboses are much more apt to recur than hemorrhages.

THE long fight between the *State Journal* and Board of Health has now dwindled to a few lines of contradiction about the number of diphtheria cases now in the city.

DR. J. M. FRANKENBURGER, who located at Topeka several months ago, found his health deteriorating and has returned to New Mexico.

WANTED—To exchange Reference Hand Book, as good as new, for Oculist's Trial Case in good condition. Address this office.

THE Kaw Pharmacal Co. have some samples of Guaiacoline that they would like to send you.

Case III.

Whitinsville, Mass.

The Mercer Chemical Co., Omaha, Neb.:

Please send me one dozen bottles Pill Vita (Blue). I am using these right along in old chronic cases of impotency and in cases of sexual neurasthenia with most gratifying success. Yours truly,

C. H. HARRIMAN, M.D.,
Whitinsville, Mass.

WE have a Yale Chair in first class condition, for sale.

Great Relief.

J. Ringwood, L. R. C. P. I., and L. M. L. Z. C. S. I., Kells, County Meath, Ireland, writes:

"I have had the most satisfactory results from the use of Lilly's Glycones. Besides their certain gentle action on the bowels, they give the greatest relief in all cases of pelvic congestion, prutitis and internal hemorrhoids."

KASTORSKY reports the successful treatment of 37 cases of diphtheria by painting with 10 per cent. alcoholic solution of menthol, application being made three times a day.

IT is reported that over 600 cases of typhoid fever have occurred at Washington, D. C. This is hardly commendable in the sanitary management of that city.

IN the French Senate there are thirty doctors and in the Chamber of Deputies fifty-eight.